



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **HIWATA, Akira, et al.**

Group Art Unit: **3744**

Serial No.: **10/657,182**

Examiner: **To be assigned**

Filed: **September 9, 2003**

P.T.O. Confirmation No.: 1620

For: **EXPANDER**

INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 CFR 1.97(b)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

April 8, 2004

Sir:

The attention of the Patent and Trademark Office is hereby directed to the documents listed on the attached Form PTO-1449. One copy of each of these documents is attached.

Documents AA-AH, AI-AR and AS were cited in a European Search Report dated March 9, 2004. A copy of the search report is also enclosed.

No fee or certification is required in connection with this Information Disclosure Statement, since it is being submitted prior to the issuance of a first official action on the merits or expiration of the three month period following the filing date or the entry of the national stage of the above-captioned application.

In accordance with 1.704(d), Applicants state that each item of information contained in the Information Disclosure Statement was cited in a communication from a Foreign Patent Office and that this communication was not received by any individual designated in 1.56(c) more than thirty days prior to the filing of the Information Disclosure.

The above information is presented so that the Patent and Trademark Office can, in the first instance, determine any materiality thereof to the claimed invention. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the documents cited in the attached Form PTO-1449 be made of record therein and appear on the first page of any patent to issue therefrom.

The Commissioner is authorized to charge our Deposit Account No. 01-2340 for any fee which is deemed by the Patent and Trademark Office to be required to effect consideration of this statement.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP



Donald W. Hanson
Attorney for Applicants
Reg. No. 27,133

DWH/plb
Atty. Docket No. **031053**
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930

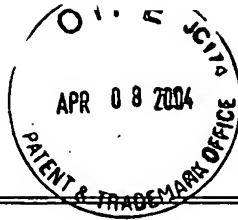


23850

PATENT TRADEMARK OFFICE

Enclosures: European Search Report
PTO-1449 (2)
References (19)

Q:\FLOATERS\IDWH\031053\04-04 IDS



INFORMATION DISCLOSURE CITATION PTO-1449	Atty. Docket No. 031053	Serial No. 10/657,182
	Applicant(s): HIWATA, Akira, et al.	
	Filing Date: September 9, 2003	Group Art Unit: 3744

U.S. PATENT DOCUMENTS

Examiner Initial		Document No.	Name	Date	Class	Subclass	Filing Date (If appropriate)
_____	AA	1,539,728	Ensign	05/26/25			02/23/24
_____	AB	4,174,931	Ishizuka	11/20/79	418	259	12/13/77
_____	AC	4,248,575	Watanabe et al.	02/03/81	418	93	01/29/79
_____	AD	4,455,129	Sakitani et al.	06/19/84	418	82	09/14/81
_____	AE	4,498,853	Sakamaki et al.	02/12/85	418	268	12/08/80
_____	AF	4,516,920	Shibuya	05/14/85	418	23	03/30/84
_____	AG	5,327,745	Gilmour	07/12/94	62	467	09/28/93
_____	AH	6,321,564 B1	Yamanaka et al.	11/27/01	62	510	03/13/00

FOREIGN PATENT DOCUMENTS

		Document No.	Date	Country	Translation (Yes or No)
_____	AI	57-108555	07/06/82	Japan	No
_____	AJ	62-77562	04/09/87	Japan	No
_____	AK	10-19401	01/23/98	Japan	Abstract
_____	AL	2001-108257	04/20/01	Japan	Abstract
_____	AM	2001-207983	08/03/01	Japan	Abstract
_____	AN	1 503 590	07/03/69	Germany	No
_____	AO	2 261 873	06/27/74	Germany	No
_____	AP	25 44 232	07/01/76	Germany	No
_____	AQ	99/02862	01/21/99	PCT	Yes
_____	AR	02/18848 A1	03/07/02	PCT	Yes

OTHER DOCUMENTS

_____	AS	Robinson et al., "Efficiencies of transcritical CO ₂ cycles with and without an expansion turbine", <i>Int. J. Refrig.</i> , Vol. 21, No. 7, pp. 577-589, 1998.
Examiner		Date Considered